THE BATTERY EXPERTS

# MATERIAL DATA SHEET

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|---|---|
| Types | V8GS,V10GS,V12GS, V13GS, V28PX, V76PX, V301, V303, V309, V315, V317, V319, V321, V329, V335, V339, V341, V344, V346, V350, V357, V361, V362, V364, V370, V371, V373, V377, V379, V381, V384, V386, V389, V390, V391, V392, V393, V394, V395, V396, V397, V399 |
| Chemical system | Ag2O \| KOH, NaOH \| Zn — Date: 2002-02-11 |
| Voltage | 1.55 V; V28PX: 6.2 V |

## 1. TYPE AND WEIGHT

| Cell Type | Weight (g) | Cell Type | Weight (g) | Cell Type | Weight (g) |
|---|---|---|---|---|---|
| V8GS (4173) | 0.9 | V335( 335) | 0.15 | V379 (379) | 0.23 |
| V10GS (4174) | 1.31 | V339 (339) | 0.22 | V381 (381) | 0.9 |
| V12GS (4178) | 1.78 | V341 (341) | 0.27 | V384 (384) | 0.69 |
| V13GS (4176) | 2.33 | V344 (344) | 1.49 | V386 (386) | 1.78 |
| V28PX (4028) | 11.1 | V346 (346) | 0.3 | V389 (389) | 1.31 |
| V76PX 4075) | 2.4 | V350 (350) | 1.49 | V390 (390) | 1.32 |
| V301 (301) | 1.78 | V357 (357) | 2.33 | V391 (391) | 0.9 |
| V303 (303) | 2.33 | V361 (361) | 0.4 | V392 (392) | 0.69 |
| V309 (309) | 1.08 | V362 (362) | 0.4 | V393 (393) | 1.08 |
| V315 (315) | 0.4 | V364 (364) | 0.33 | V394 (394) | 1.04 |
| V317 (317) | 0.18 | V370 (370) | 0.6 | V395 (395) | 0.75 |
| V319 (319) | 0.25 | V371 (371) | 0.61 | V396 (396) | 0.55 |
| V321 (321) | 0.25 | V373 (373) | 0.5 | V397 (397) | 0.50 |
| V329 (329) | 0.6 | V377 (377) | 0.39 | V399 (399) | 0.75 |

## 2. INGREDIENTS

| | | Approx. percentage (%) of total weight |
|---|---|---|
| Active materials* | - Silver oxide - Ag2O<br>- Manganese dioxide - MnO2<br>- Zinc - Zn<br>- Potassium hydroxide - KOH<br>- Sodium hydroxide - NaOH | 13 - 34<br>0 - 14<br>5 - 10<br>0 - 3<br>0 - 2 |
| Main passiv materials* | - Steel<br>- Copper<br>- Nickel<br>- Mercury<br>- Plastic | 26 - 57<br>2 - 5<br>1 - 13<br>0.2 - 0.6<br>2 - 7 |

* All cell types are sealed button cells or button cell batteries, no chemical hazard will be posed as long as the cell remains in sealed condition.

## 3. SAFETY GUIDELINE

3.1 Keep out of the reach of children. If swallowed, contact a physician at once.
3.2 Do not heat. Nor dispose in fire. May burst or release toxic materials.
3.3 Avoid forced discharge.
3.4 Do not short circuit, may cause burns.
3.5 Do not charge.
3.6 Do not solder the battery directly.
3.7 Do not disassemble, apply excessive pressure or deform.
3.8 Battery compartment should provide sufficient space for battery to expand in case of abuse.
3.9 Either battery compartment or battery connector should have a design that makes it impossible to place the battery in reverse polarity.
3.10 Equipment intended for use by children should have tamper-proof battery compartment.
3.11 Battery of different electrochemical system, grades, or brands should not be mixed.
3.12 Battery disposal method should be in accordance with local and state regulations.

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| Prepared by : Dr. Krebs | Approved by : Dr.Holl |

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